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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/925,159

08/08/2001

Stephen Clark Purcell

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,159

Applicant(s)

PURCELL, STEPHEN CLARK

Examiner

Lewis A. Bullock, Jr.

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 7-10, 12, 14-17, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by NECHES (U.S. Patent 5,276,899).

As to claim 1, NECHES teaches a method comprising: serially receiving, from a source (host computer), a plurality of forward messages (requests) each addressed to one of a plurality of destinations (interface processor / other processors); receiving a plurality of availability signals (status indicators of the processors), each availability signal indicating that one of the destinations (other processors) is available to accept a forward message (whether the processor is busy, idle, etc.) (col. 6, line 16-17); simultaneously (concurrently) sending a forward message (message packet) to each available destination (other processor); simultaneously (concurrently) receiving, after a predetermined period of time, a plurality of reverse messages (response information) from the destinations (other processors), each reverse message (response information) corresponding to one of the forward messages (message packets) simultaneously sent to an available destination (other processors); and serially sending the reverse messages (response messages) to the source (host computer) (col. 4, line 29 – col. 6, line 22; col. 11, line 29 – col. 12, line 42; col. 15, line 25 – col. 18, line 21; col. 43, line 48 – col. 44, line 57).

As to claim 2, NECHES teaches the source (host computer) identifies each of the forward messages (requests / message packets) by a different tag (transaction number / TN), further comprising: placing a tag (transaction number / TN) in a delay buffer (H.S. RAM / incoming or outgoing message storage) when sending to a destination (other processor) the forward message (message packet) identified by that tag, wherein the delay buffer implements a delay equal to the predetermined period of time such that the tag is available when receiving from memory the reverse message (response information) corresponding to the forward message (message packet); and sending the tag to the source (host computer) with the reverse message (response information), whereby the source (host computer) associates the reverse message (response information) with the forward message (message packet) (col. 23, line 50 – col. 28, line 44).

As to claim 3, NECHES teaches associating a priority (priority) with each forward message (message packet); and sending a forward message (message packet) to a destination (other processor) when that forward message (message packet) has a higher priority than other forward messages (message packets) addressed to the destination (other processor) (col. 4, line 29 – col. 6, line 22; col. 11, line 29 – col. 12, line 42; col. 15, line 25 – col. 18, line 21).

As to claim 5, NECHES teaches associating a priority (priority) with each reverse message (response information); and sending a reverse message (response information) to the source (host computer) when that reverse message (response message) has a higher priority than other reverse messages (response messages) (col. 4, line 29 – col. 6, line 22; col. 11, line 29 – col. 12, line 42; col. 15, line 25 – col. 18, line 21).

As to claim 7, NECHES teaches each destination is a memory bank (via the processors being access module processors controlling different secondary storages), each forward message (message packet) is a memory transaction (performing operations on the storages), and each reverse message (response information) is the result of one of the memory transactions (col. 4, line 29 – col. 6, line 22; col. 11, line 29 – col. 12, line 42; col. 15, line 25 – col. 18, line 21).

As to claims 8-10, 12 and 14, reference is made to an apparatus that is similar to the method of claims 1-3, 5 and 7 and is therefore met by the rejection of claims 1-3, 5 and 7 above.

As to claims 15-17, 19 and 21, reference is made to a computer program product that is similar to the method of claims 1-3, 5 and 7 and is therefore met by the rejection of claims 1-3, 5 and 7 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6, 11, 13, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over NECHES (U.S. Patent 5,276,899).

As to claims 4 and 6, NECHES teaches the forward message (message packets) and reverse messages (response information) having priorities and processing the messages based on their priorities (col. 4, line 29 – col. 6, line 22; col. 11, line 29 – col. 12, line 42; col. 15, line 25 – col. 18, line 21; col. 43, line 48 – col. 44, line 57). However, the NECHES does not teach the priorities represent the age of the message. “Official Notice” is taken in that it is well known in the art at the time of the invention that a priority represents the age of the message, i.e. how long ago the message was sent, or what time it was generated. Therefore, it would be obvious to one skilled in the art to combine the teachings of NECHES with the well-known technique of priority representation in order to avoid excessively delaying low priority messages.

As to claims 11 and 13, reference is made to an apparatus that is similar to the method of claims 4 and 6 and is therefore met by the rejection of claims 4 and 6 above.

As to claims 18 and 20, reference is made to a computer program product that is similar to the method of claims 4 and 6 and is therefore met by the rejection of claims 4 and 6 above.

Response to Arguments

5. Applicant's arguments filed 10/8/04 have been fully considered but they are not persuasive. Applicant argues that Neches does not show or suggest "serially receiving, from a source, a plurality of forward messages each addressed to one of a plurality of destinations" because Neches requests go from the host computer to an interface processor, which determines whether to route the request. Applicant states that the invention provides a more efficient technique of interconnecting multiple processors because an interface processor is not needed, and by not using an interface processor additional delays are avoided. The examiner disagrees with this argument for the following reason: The cited claims detail the step in question of , "serially receiving, from a source, a plurality of forward messages each addressed to one of a plurality of destinations", but also details "simultaneously sending a forward message to each available destination". The claims make no mention that the forwarded messages are simultaneously sent from a source to the destinations or whether an intermediary device is used to simultaneously send forward messages to the destinations. Therefore, Applicant arguments are unpersuasive since the claims allow for either interpretation to occur, which is consistent with the teachings of Neches.

Applicant then argues that Neches does not teach or suggest the step of "simultaneously receiving, after a predetermined period of time, a plurality of reverse messages from the destinations, each reverse message corresponding to one of the forward messages simultaneously sent to an available destination. The examiner disagrees. Neches clearly states concurrently responding to the broadcast messages with response messages indicating whether the relevant processors have accepted the broadcast message by grouping the response messages together (col. 52, lines 13-16; col. 46, lines 26-30; col. 45, lines 56-59). Therefore, the examiner believes that the limitations of the claims are met by the reference as disclosed above.

Applicant states that claims 2-21 are allowable for the same reasoning as disclosed above. In response, the examiner states the claims are rejected and therefore not allowable for the reasons detailed above and maintains the rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

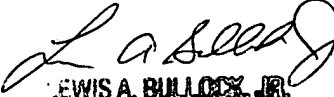
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER

February 2, 2005